N. B. Nagaraj

BRUHAT BANGALORE MAHANAGARA PALIKE

Office of the Executive Engineer, Hebbal Division, JC Nagar main road, Bangalore.

REGARDING QUALITY CONTROL - CERTIFICATE

On verification of quality control test reports available in the file and also from inspection report of Technical Team Deployed for this purpose generally the work executed is satisfactory. Compliance of quality control test report as per MORT&H at this stage is not - feasible since this work was executed 2 (Two) (as case may be) years back.

Name: of work: Reconstruction of culverts in Ward No. 18

Assistant Engineer
Ward No. 18

Assistant Executive Engineer,
_____ Sub-Division,
BBMP.

Executive Engineer,
Hebbal Division,
BBMP

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Building & Highway Material Testing Laboratory

NABL - Accredited Laboratory as per ISO / IEC-17025 : 2005

Job No : CTCE/BBMP/W.No.18/NBN/CEMENT/2013-14 Date: 22.06.2013

TEST REPORT

CLIENT	:	**Asst. Executive Engineer,** Hebbal Sub Division, BBMP, Bangalore.
AGENCY	:	**Mr. N. B. Nagaraj,** Contractor, Bangalore.
NAME OF THE WORK	:	Reconstruction of Culverts in Ward No.18, BBMP, Bangalore.
REFERENCE	:	EE/H/AE/WO/38/2013-14 Dated: 20.06.2013
SAMPLE ID	:	Cement
SAMPLES SUPPLIED BY	:	AGENCY

The results of the tests conducted on the cement sample are as follows:

Sl.No	Descriptions	Test Method as per IS	Test Result	Requirements as per IS: 8112-1989
1	a) Initial Setting Time	IS-4031 (Part -5)	152 Minutes	Not Less than 30 Minutes
	b) Final Setting Time	IS-4031 (Part -5)	485 Minutes	Not More than 600 Minutes
2	Soundness	IS-4031 (Part 3) by the Le-Chatelier method	1 mm	Not more than 10 mm
3	Standard Consistency	IS-4031 (Part -4)	26.50 %	-

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Note:

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⇒ Any Query regarding the report must be reported within 15 days from the date of testing.

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Job No.: CTCE/BBMP/W.No.18/NBN/SAND/2013-14 : 22.06.2013

TEST REPORT ON FINE AGGREGATES (SAND)
IS 383-1970 (RA- 2002)

Client : **Asst. Executive Engineer,** Hebbal Sub Division, BBMP, Bangalore.

Agency : **Mr. N. B. Nagaraj,** Contractor, Bangalore.

Name of Work : Reconstruction of Culverts in Ward No.18, BBMP, Bangalore.

Reference : EE/H/AE/WO/38/2013-14 Dated: 20.06.2013

Date of Testing : 22.06.2013

Material : Sand

Total Wt. of Aggregates in gms **2000**

Is Sieve Size in mm	Weight Retained (gm)	Retained Weight in %	Cumulative Retained Weight in %	Cumulative Weight Passing in %	Spec.Limits For Zone-II
10	0	0	0	100	100
4.75	96	4.80	4.80	95.2	90-100
2.36	210	10.50	15.30	84.7	75-100
1.18	489	24.45	39.75	60.3	55-90
600 Micron	430	21.50	61.25	38.8	35-59
300 Micron	498	24.90	86.15	13.9	8-30
150 Micron	225	11.25	97.40	2.6	0-10

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Job No: CTCE/BBMP/W.No.18/NBN/AGG/2013-14 : 22.06.2013

TEST REPORT ON COARSE AGGREGATES
IS 383-1970 (RA- 2002)

Client : **Asst. Executive Engineer,** Hebbal Sub Division, BBMP, Bangalore.

Agency : **Mr. N. B. Nagaraj,** Contractor, Bangalore.

Name of Work : Reconstruction of Culverts in Ward No.18, BBMP, Bangalore.

Reference : EE/H/AE/WO/38/2013-14 Dated: 20.06.2013

Date of Testing : 22.06.2013

Material : 40mm Aggregates

Total Wt. of Aggregates in gms **25500**

Is Sieve Size in mm	Weight Retained (gm)	Retained Weight in %	Cumulative Retained Weight in %	Cumulative Weight Passing in %	Spec.Limits
80	0	0	0	100	100
40	1010	3.96	3.96	96.04	95-100
20	16258	63.76	67.72	32.28	30-70
10	5389	21.13	88.85	11.15	10-35
4.75	2245	8.80	97.65	2.35	0-5

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Job No.: CTCE/BBMP/W.No.18/NBN/CUBE/2013-14

27.07.2013

TEST REPORT ON CONCRETE CUBES

Client	: **Asst. Executive Engineer,** Hebbal Sub Division, BBMP, Bangalore.
Agency	: **Mr. N. B. Nagaraj,** Contractor, Bangalore.
Name of the work	: Reconstruction of Culverts in Ward No.18, BBMP, Bangalore.
Reference	: EE/H/AE/WO/38/2013-14 Dated: 20.06.2013
Sample ID	: Cement Concrete
Size of cubes	: 150mmx150mmx150mm
Cross Sectional Area	: 22500 mm^2
Technical Reference	: IS: 516-1959 (Reaffirmed 2008)
Grade of Concrete	: M_{15}
Compressive Strength as on	: 28th day

Sl.No.	Date of casting	Date of testing	Weight of cube (Kg)	Failure load (KN)	Compressive strength (N/mm^2)
1	29.06.2013	27.07.2013	8.145	343.2	15.25
2	29.06.2013	27.07.2013	.8.269	354.6	15.76
3	29.06.2013	27.07.2013	8.387	367.8	16.35

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Job No.: CTCE/BBMP/W.No.18/NBN/STEEL/201-14

27.06.2013

TEST REPORT ON REINFORCEMENT STEEL

Client	:	**Asst. Executive Engineer,** Hebbal Sub Division, BBMP, Bangalore.
Agency	:	**Mr. N. B. Nagaraj,** Contractor, Bangalore.
Name of the work	:	Reconstruction of Culverts in Ward No.18, BBMP, Bangalore.
Reference	:	EE/H/AE/WO/38/2013-14 Dated: 20.06.2013
Date of Test	:	27.06.2013
Technical Reference	:	IS: 1786-2008

Sl. No	Nominal size (dia) (mm)	Mass per metre (Kg/mtr)	TENSILE STRENGTH			Bend Test	Rebend Test
			0.20% proof stress/Yield stress N/mm²	Tensile strength (Ultimate stress) N/mm²	Elongation percent gauge length		
1	12	0.89	515	558	13.45	O.K	O.K

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